



Multilateral Medical Operations Panel (MMOP)

Medical Informatics & Technology (MIT) Working Group

IMMR Phase 1 Prototyping Plan Inputs

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Purpose of IMMR Prototype Phase 1 (IPP1)

- **Conduct the first prototyping effort of the MDS using the MITWG strategy for prototyping and development.**
 - Spiral Incremental Approach
 - Plan (replan), Build, Evaluate IMMR in short manageable phases that results in MDS technology and User Content
- **Breathe life into the MITWG efforts and demonstrate MDS capabilities for MMOP User assessment.**
- **Define realistic objectives that can be demonstrated and evaluated in a relatively short time**
 - User Content (Processes and Documentation)
 - Technology (systems)
- **List candidate objectives for future IMMR Prototype Phases: IPP2, IPP3, ... IPPn**
- **Build a foundation that can support future phased prototyping.**

IPP1 Plan Overview

- **Define a scenario for a limited number of FSs and custodians (BMEs) to store and retrieve a limited number of example data MICs from an IMMR Repository prototype.**
 - Focus on PDDs with common sets of parameters, definitions and format that can readily be promoted into MIC-DD/F, MIC_DD/N and MIC-DD/Us by using the MITWG Process for Developing MIC-DDs
 - Create example MICs based upon MIC-DD/F, MIC-DD/N and MIC-DD/U for custodians to store and for FSs to access.
 - Leverage already existing SharePoint Portal/EDMS capabilities to create a prototype IMMR repository.
 - Leverage already existing agency capabilities and workstations to provide secure connectivity and user access.
- **Approach is for FS participation to assist in**
 - Promotion of PDDs to MIC-DDs
 - Evaluation of technology for IMMR
 - Evaluation of FS interaction with the IMMR
- **Utilize the IPP1 repository to prototype the documentation technology for the MIC Catalog.**
 - Contain results of the PDDs and MIC-DDs and main document
 - Evaluate using MITWG FS POCs and members

IMMR Prototype Phase 1 (IPP1) Plan for PDDs and MIC-DDs

- **For IPP1 there will be two lists following the MIC Catalog appendix approach:**
 - A list of PDD/Fs and PDD/Ns (titled IPP1 PDD Appendix)
 - A list of MIC-DDs, including (titled IPP1 MIC-DD Appendix)
 - ◆ MIC-DD/U
 - ◆ MIC-DD/F
 - ◆ MIC-DD/N
- **Initially, all documents considered for sharing in the IPP1 will be designated as PDD/Fs and PDD/Ns**
- **During the IPP1 effort, the MITWG Process for developing MIC-DDs will be used to promote (process) the PDDs into MIC-DD/Fs, MIC-DD/Ns, and MIC-DD/Us.**
- **The results of the IPP1 lists (Appendices) will be used to update the respective MIC Catalog Appendices.**

IMMR Prototype Phase 1 (IPP1) Plan for MICs

- **IPP1 will initiate and refine over time versions of the PDD and MIC-DD lists (Appendices). Versions will be maintained by date.**
- **IPP1 will store sample-data examples of the PMICs and MICs according to PDDs and MIC-DDs defined for lists.**
- **Intent is to promote the PMICs into MICs by**
 - reaching agreement on a common MIC-DD
 - IPP1 demonstrations/evaluations of the storage and retrieval of multiple instances of associated MICs by FSs and custodians.
- **As agreement is reached on each MIC and MIC-DD, then these will be added to the MIC Catalog**

IPP1 Objectives

- **Build a list of specific PDDs to prototype and promote into MIC-DDs from the following:**
 - GCTC Specified
 - ◆ List (shown on slide 8)
 - ◆ Merging of Exercise Fitness
 - ◆ MSMB Certificate
 - ◆ Mission Debrief
 - MED Vol B used by ESA/GMO/NASA during STS-114
 - ◆ List TBD
- **Evaluation of storage/retrieval of example MICs using above results**
- **Involve Limited set of MITWG FS POCs and custodians**
- **Document PDDs, MIC-DDs, and MIC Catalog on SharePoint – Documented results from above**
- **Refine MCC MIC Data Flow using above results**
 - Control Center or SMOT or MSMB MIC Data Flow (TBD)
- **Evaluation of SharePoint as a potential IMMR option**
- **Evaluation of User Interface and connectivity**
- **Evaluation of security aspects of prototype**

IPP1 Example Vs Real Data Pros & Cons

- **Pro Example Data**

- Keeps real data safe while we work out the bugs
- Allows for simpler and quicker implementation of IPP1, especially with regards to security controls

- **Con Example Data**

- FSs are too busy, they won't use it, and no useful feedback.

- **Pro Real Data**

- Would be immediately useful to FSs in real-time operations

- **Con Real Data**

- Would require more security levels
- Might take longer to obtain approvals and implementation
- Must agree that this is a prototype and not a primary support implementation.

Document Classifications & Sharing Implications For IPP1

| Proposed GCTC MIC | NASA Equivalent MIC | Current Multilateral State | Comments |
|---|---|---|----------------------------------|
| All crew members biography | Public Available on Web Site | http://www.jsc.nasa.gov/Bios/astrbio.html | |
| Biomedical Training Program of ISS crew | Carbon Dioxide Exposure Training | Agency specific format (US/FSA) | May be others |
| Space Flight Factors training review | N/A | Agency specific format (US/FSA) | FSA only requirement |
| Current ISS MSMB Medical data and qualifications | MSMB Certificate | Multilateral format (MMOP) | |
| Physical Training review and fitness assessment | MRID 077/078 – Functional Fitness Assessment & Recommendation | Agency specific formats with preliminary attempt at standard format (US/FSA) | Med Vol B 5.1 |
| The list of ground and flight experiments with informed consent signed each cosmonaut/astronaut | ISSMP List? | Agency specific format (US/FSA) | Still pending final confirmation |
| The certificate on readiness to a perform a vein puncture and blood draw for medical and biologic experiments on Russian segment ISS. | CMO Training DB (TAMS) Report | Agency specific format (US/FSA) | |
| The conclusion of ISS Program Biomedical Section (the results of BMT). | N/A | Agency specific format (FSA) | |
| Russian Chief Medical Board Protocol (ГМК protocol) | N/A | Agency specific format (FSA) | |
| Pre launch medical examination report | MRID 009 (CS Clinical Assessment) | Agency specific format (US/FSA) | Med Vol. B 1.1 |
| Post-flight rehabilitation program | MRID 026 (Post-flight Rehab) | Agency specific format (US/FSA) | |

Define Future IPP Objectives From List Below

- **Build a complete list of PDDs and MIC-DDs from IPP1 results and the following:**
 - GCTC Recommendations
 - MED Vol A and B
 - All MIC Data Flows
- **Storage/retrieval of example MICs using above results**
- **Storage/retrieval of MICs using real data based upon MIC Data Flows. (Repeat for all MIC Data Flows)**
- **Full set of FS and custodians**
- **Documented PDDs, MIC-DDs, and MIC Catalog on SharePoint – Documented results from above**
- **Refined MCC MIC Data Flows using above results**
- **Evaluation of SharePoint as a potential IMMR option**
- **Evaluation of User Interface and connectivity**
- **Evaluation of security aspects of prototype**

Decision and Plans

- **Agree with overall IPP1 plan and objectives contained in the slides in this presentation as updated during the FTF Meeting.**
 - Yes ? _____
 - No, more time needed to discuss?

- **Proceed with incorporating these slides and strategies into the draft of the IPP1 Plan document.**
 - Yes ? _____
 - No, more time needed to discuss?

- **Other**
 - _____
 - _____
 - _____